

Amendment and Response

Applicant: John A. Krueger

Serial No.: 10/037,795

Filed: January 3, 2002

Docket No.: SPEC – 6137

Title: BONE MARROW ASPIRATION DEVICE WITH CURVED TIP

IN THE CLAIMS

Please cancel claims 6 and 17.

Please add claims 18-22.

Please amend claims 7, 9, 11, 15, and 16 as follows:

1. – 5. (Cancelled)

6.(Cancelled)

7.(Currently Amended) The bone biopsy system according to ~~claim 6~~claim 15, wherein said proximal end of the cannula body of said biopsy aspiration device further comprises an attachment structure for removably coupling an aspiration source.

8.(Previously Presented) The bone biopsy system according to claim 7 wherein said attachment structure comprises a luer attachment.

9.(Currently Amended) The bone biopsy system according to ~~claim 6~~claim 15 wherein the proximal end of said biopsy aspiration device comprises viewable indicia.

10.(Original) The bone biopsy system according to claim 9 wherein said viewable indicia comprises a marking indicating the position of the laterally oriented distal opening.

11.(Currently Amended) The bone biopsy system according to ~~claim 6~~claim 15 further comprising a stylet adapted for removable insertion within said outer cannula.

12.(Previously Presented) A method of obtaining a bone marrow sample from a marrow sampling site in a patient comprising the steps of:

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- (a) penetrating the cortex of a bone with an outer cannula having a stylet positioned within, the distal portion of said stylet extending beyond the distal end of said outer cannula, until the distal end of said outer cannula is surrounded by marrow;
- (b) removing said stylet from said outer cannula;
- (c) inserting into said outer cannula a biopsy aspiration device such that the distal tip of said biopsy aspiration device is extended into marrow, said biopsy aspiration device comprising:
 - an elongated cannula body having a proximal end, a distal tip, and a linear longitudinal axis;
 - a lumen running longitudinally through the interior of said cannula body, said lumen terminating at a proximal opening and terminating at a single laterally oriented distal opening immediately adjacent to the distal tip;
 - wherein said distal tip of said cannula body comprises an arcuate curved surface on the side opposite to said laterally oriented distal opening, said arcuate curved surface terminating at said distal opening;
- (d) attaching an aspiration source to the proximal end of said biopsy aspiration device;
and
- (e) withdrawing a sample of marrow from a marrow sampling site.

13.(Original) The method according to claim 12 further comprising the step of rotating said biopsy aspiration device within said outer cannula thereby repositioning the laterally oriented distal opening within the marrow sampling site.

14.(Original) The method according to claim 12 further comprising:

- (f) removing the biopsy aspiration device from the outer cannula; and
- (g) further advancing the outer cannula into the bone to obtain a core sample.

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15.(Currently Amended) ~~The bone biopsy system according to claim 6, further~~ A bone

biopsy system comprising:

an outer cannula defining a length from a proximal end to a distal tip;
a handle portion coupled to the proximal end of said outer cannula;
wherein said outer cannula is adapted to removably accommodate therein a biopsy
aspiration device, said biopsy aspiration device being adapted to obtain a bone
marrow sample and comprising:
an elongated cannula body having a length from a proximal end to a distal tip and
defining a linear longitudinal axis, wherein said length of said elongated
cannula body is greater than said length of said outer cannula;
a lumen running longitudinally through the interior of said cannula body, said
lumen terminating at a proximal opening and terminating at a single
laterally oriented distal opening immediately adjacent to the distal tip;
wherein said distal tip of said cannula body comprises an arcuate curved surface
on the side opposite to said laterally oriented distal opening, said arcuate
curved surface terminating at said distal opening;
an outer cannula hub connected to a proximal portion of said outer cannula; and
an inner cannula hub connected to the proximal end of said elongated cannula body;
wherein the hubs are configured to establish a substantially air tight seal upon assembly
of the elongated cannula body within the outer cannula.

16.(Currently Amended) ~~The~~ A bone biopsy system according to claim 6comprising:

an outer cannula defining a length from a proximal end to , wherein the outer cannula
terminates at a beveled distal end tip;
a handle portion coupled to the proximal end of said outer cannula;
wherein said outer cannula is adapted to removably accommodate therein a biopsy
aspiration device, said biopsy aspiration device being adapted to obtain a bone
marrow sample and comprising:

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an elongated cannula body having a length from a proximal end to a distal tip and defining a linear longitudinal axis, wherein said length of said elongated cannula body is greater than said length of said outer cannula; and
a lumen running longitudinally through the interior of said cannula body, said lumen terminating at a proximal opening and terminating at a single laterally oriented distal opening immediately adjacent to the distal tip;
wherein said distal tip of said cannula body comprises an arcuate curved surface on the side opposite to said laterally oriented distal opening, said arcuate curved surface terminating at said distal opening.

17.(Cancelled)

18.(New) The bone biopsy system according to claim 16 wherein said proximal end of the cannula body of said biopsy aspiration device further comprises an attachment structure for removably coupling an aspiration source.

19.(New) The bone biopsy system according to claim 18 wherein said attachment structure comprises a luer attachment.

20.(New) The bone biopsy system according to claim 16 wherein the proximal end of said biopsy aspiration device comprises viewable indicia.

21.(New) The bone biopsy system according to claim 20 wherein said viewable indicia comprises a marking indicating the position of the laterally oriented distal opening.

22.(New) The bone biopsy system according to claim 16 further comprising a stylet adapted for removable insertion within said outer cannula.